#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-020054

Address: 333 Burma Road **Date Inspected:** 22-Mar-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Liu Hua Jie, Lu Li Qing, Geng Wc WI Present: Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No

N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No

Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Orthotropic Box Girder (OBG)

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Amit K. Juvekar, was present during the times noted above for observations relative to the work being performed.

This QA Inspector observed the following work in progress:

Assembly, Bay 14, 12BE, PP113.

During Random Visual in process Inspection, this QA inspector observed fit-up of Corner assembly diaphragm CA3002C-001 of Corner Assembly CA3002C. The attached photographs provide additional detail.

Assembly, Bay 14, 12AE, PP112.

During the Quality Assurance (QA) random in-process visual inspection, this QA inspector observed ZPMC Personnel performing fit up of Longitudinal diaphragm Identified as LD3007-001. The attached photographs provide additional detail.

Assembly, Bay 14, 12AE, Side plate (SP3004/A).

SMAW welding of weld joint SP3004/A-001-65 to 69; located on assembly, Bay 14, 12AE. Welder is identified as 044772; ZPMC Quality Control Inspector (QC) is identified as Geng Wei. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-P-2214-B-U2-FCM-1.

Assembly, Bay 13, Traveler rail.

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FCAW Repair welding of weld joint 20TR2-015-015(WRR # B-WR11078); located on assembly, Bay 13. Welders are identified as 058551; ZPMC Quality Control Inspector (QC) is identified as Zhu Nan Shu. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-345-FCAW-1G(1F)-REPAIR-1.

Assembly, Bay 13, Traveler rail.

FCAW Repair welding of weld joint 20TR2-009-011(WRR # B-WR11065); located on assembly, Bay 13. Welders are identified as 055491; ZPMC Quality Control Inspector (QC) is identified as Zhu Nan Shu. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-345-FCAW-1G(1F)-REPAIR-1.

Assembly, Bay 14, 12AE, Corner Assembly CA6501C.

FCAW welding of weld joint CA6501C-041 to 050 & 072 to 081; located on assembly, Bay 14, 12AE. Welder is identified as 044801; ZPMC Quality Control Inspector (QC) is identified as Geng Wei. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-T-2133.

Assembly, Bay 14, 12BE, DP3013A TO DP3014A.

During the Quality Assurance (QA) random in-process visual inspection, this QA inspector observed ZPMC Personnel performing Ultrasonic Testing (UT) of Deck plannel to Deck plannel weld Identified as SEG3005\*-002. The attached photographs provide additional detail.

Assembly, Bay 14, 12BW, Deck plate (DP3055A) to Deck plate (DP3054A).

SAW welding of weld joint SEG3005\*-005; located on assembly, Bay 14, 12BW. Welder is identified as 045265; ZPMC Quality Control Inspector (QC) is identified as Liu Hua Jie. The welding variables recorded by Quality Control Inspector (QC) appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2C-S-2.

Assembly, Bay 13, Mock-Up for 13AE.

During the Quality Assurance (QA) random in-process visual inspection, this QA inspector observed ZPMC carring out Mock-Up for 13AE. This QA inspector noticed following things

- BP032-003 Bottom pannel plate welding inprocess.
- BP032-004 fit-up & tack welding in process.
- ZPMC welded approximate 400mm length of tack weld on both ends of the plate.
- Root pass compelted on BP032-004.
- Cracks observed in root pass.
- ZPMC removeing cracks by Carbon arc gouging.

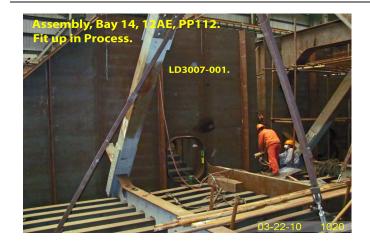
Training for Phased Array Ultrasonic Testing.

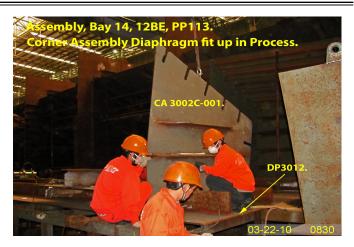
This QA inspector attended Training for Phased Array Ultrasonic Testing (PAUT) from 1600Hrs. to 1900Hrs.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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## **Summary of Conversations:**

No relevant conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By:	Juvekar,Amit	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer